PEPTIDES

VOLUME 1 NUMBER 1 SPRING 1980

CONTENTS

Substance P as a baro- and chemoreceptor afferent neurotransmitter: Immunocytochemical and neurochemical evidence in the rat. HELKE, C. J., T. L. O'DONOHUE and D. M. JACOBOWITZ 1

Vasopressin neurons grafted into Brattleboro rats: Viability and activity. GASH, D. and J. R. SLADEK, JR. 11

Central administration of peptides alters thermoregulation in the rabbit. LIPTON, J. M. and J. R. GLYN 15

Relationship of melanocyte-stimulating hormone to photoreceptor damage. O'STEEN, W. K. and A. J. KASTIN 19

Interaction of opiate peptide and noradrenalin systems: Light microscopic studies. WATSON, S. J., C. W. RICHARD III, R. D. CIARANELLO and J. D. BARCHAS 23

Enkephalinase: Selective inhibitors and partial characterization. SULLIVAN, S., H. AKIL, D. BLACKER and J. D. BARCHAS 31

Cellular characteristics of immunolabeled luteinizing hormone releasing hormone (LHRH) neurons. KOZLOWSKI, G. P., L. CHU, G. HOSTETTER and B. KERDELHUÉ 37

Cholecystokinin acts on the hypothalamic "noradrenergic system" involved in feeding. McCALEB, M. L. and R. D. MYERS 47

CCK-octapeptide injected in CSF decreases meal size and daily food intake in sheep. DELLA-FERA, M. A. and C. A. BAILE 51

A neuroheptapeptide influence on cognitive functioning in the elderly. MILLER, L. H., G. A. GROVES, M. J. BOPP and A. J. KASTIN 55

Simultaneous monoamine histofluorescence and neuropeptide immunocytochemistry: I. Localization of catecholamines and gonadotropin-releasing hormone in the rat median eminence. McNEILL, T. H., D. E. SCOTT and J. R. SLADEK, JR. 59

The source of an aggression-promoting olfactory cue, released by α-Melanocyte stimulating hormone, in the male mouse. NOWELL, N. W., A. J. THODY and R. WOODLEY 69

Effect of methionine-enkephalin on xanthophore aggregation. SATAKE, N. 73

Simultaneous monoamine histofluorescence and neuropeptide immunocytochemistry: III. Ontogeny of catecholamine varicosities and neurophysin neurons in the rat supraoptic and paraventricular nuclei. KHACHATURIAN, H. and J. R. SLADEK, JR. 77

Chromatographic and biologic analysis of ME and OVLT LHRH. SAMSON, W. K., G. SNYDER, C. P. FAWCETT and S. M. McCANN 97

Influence of substance P on the behavioral changes induced by haloperidol in rats. JOLICOEUR, F. B., D. B. RONDEAU, F. BELANGER, G. FOURIEZOS and A. BARBEAU 103

An analog of MSH/ACTH 4-9 enhances interpersonal and environmental awareness in mentally retarded adults. SANDMAN, C. A., B. B. WALKER and C. A. LAWTON 109

ANNOUNCEMENTS 115

PEPTIDES

VOLUME 1 NUMBER 2 SUMMER 1980

CONTENTS

Changes in plasma, pituitary and brain α-MSH content in rats from birth to sexual maturity. THODY, A. J., M. E. CELIS and C. FISHER 125

Bombesin elicits satiety in sham feeding rats. MARTIN, C. F. and J. GIBBS 131

ACTH accelerates recovery of neuromuscular function following crushing of peripheral nerve. STRAND, F. L. and T. T. KUNG 135

Effects of taurine and γ-aminobutyric acid on akinesia and analgesia induced by D-Ala^2-Met-enkephalinamide in rats. IZUMI, K., E. MUNEKATA, H. YAMAMOTO, T. NAKANISHI and A. BARBEAU 139

Effects of α-MSH and melatonin on passive avoidance and on PA-induced defecation and plasma 11-OHCS in hypophysectomized rats. DATTA, P. C. and M. G. KING 147

24-Hour plasma secretin level and pancreatic secretion in dog. LEE, K. Y., L. MILLIKAN, H. NISHIWAKI, Y. C. KIM, T.-M. CHANG and W. Y. CHEY 155

Immunochemical characterization of neurotensin-like peptides in chicken. CARRAWAY, R. and Y. M. BHATNAGAR 159

Isolation, structure and biologic activity of chicken intenstinal neurotensin. CARRAWAY, R. and Y. M. BHATNAGAR 167

Tyrosine-modified analogs of methionine-enkephalin and their effects on the mouse *vas deferens*. COY, D. H. and A. J. KASTIN 175

D-amphetamine-induced hypothermia and hypermotility in rats: Changes after systemic administration of beta-endorphin. YEHUDA, S., J. ZADINA, A. J. KASTIN and D. H. COY 179

BRIEF COMMUNICATION

A useful method for formylation of peptides. DAY, A. R., N. MUTHUKUMARASWAMY and R. J. FREER 187

ANNOUNCEMENTS 189

PEPTIDES

VOLUME 1 NUMBER 3 FALL 1980

CONTENTS

Effect of central injection of bradykinin and bradykinin potentiating factor upon release of anterior pituitary hormones in ovariectomized female rats. STEELE, M. K., A. NEGRO-VILAR and S. M. McCANN 201

$ACTH_{4-10}$ affects behavior but *not* plasma corticosterone levels in a conditioned taste aversion situation. SMOTHERMAN, W. P. and S. LEVINE 207

Radioimmunoassay of methionine^5-enkephalin sulphoxide: Phylogenetic and anatomical distribution. KING, J. A. and R. P. MILLAR 211

Gastrin release after truncal vagotomy in fistula dogs: Hypersensitivity to bombesin but not bethanechol. HIRSCHOWITZ, B. I. 217

Forms and activity of high molecular weight adrenocorticotropin in guinea pig. GASSON, J. C. . 223

Bradykinin analogs containing α-aminoisobutyric acid (Aib). VAVREK, R. J. and J. M. STEWART 231

Pupillary effects of leucine and methionine enkephalin in rats after intraperitoneal administration. TORTELLA, F. C., A. COWAN and M. W. ADLER 237

Interaction of MIF-I or alpha-MSH with d-amphetamine or chlorpromazine on thermoregulation and motor activity of rats maintained at different ambient temperatures. YEHUDA, S. and A. J. KASTIN 243

Incorporation of regulatory peptide hormones by individual cells of the adrenal cortex: Prolactin-adrenocorticotrophin differences. NOLIN, J. M. 249

Dynamics of injected somatostatin in blood of patients with hepatic failure and acromegaly. KASTIN, A. J., A. ARIMURA, D. GONZALEZ-BARCENA, J. FISHBACK, A. V. SCHALLY and D. H. COY 257

BRIEF COMMUNICATION

Vasopressin analogues and spatial short-term memory in rats. BUREŠOVÁ, O. and J. ŠKOPKOVÁ . 261

ANNOUNCEMENTS 265

PEPTIDES

VOLUME 1 NUMBER 4 WINTER 1980

CONTENTS

Are learning and attention related to the sequence of amino acids in ACTH/MSH peptides? SANDMAN, C. A., B. E. BECKWITH and A. J. KASTIN 277

Vasotocin, melatonin and narcolepsy: Possible involvement of the pineal gland in its patho-physiological mechanism. PAVEL, S., R. GOLDSTEIN and M. PETRESCU 281

Pharmacological comparison of bPTH-(1-34) and other hypotensive peptides in the dog. TENNER, T. E., JR., C. M. YANG, J. K. CHANG, M. SCHIMIZU and P. K. T. PANG 285

Synthesis of several chemotactic peptide antagonists. DAY, A. R., D. PINON, N. MUTHUKUMARASWAMY and R. J. FREER 289

Opiate receptor antagonism by l-prolyl-l-leucyl-glycinamide, MIF-I. DICKINSON, S. L. and P. SLATER 293

Estrogen and the subcellular distribution of luteinizing hormone releasing hormone: Rate sedimentation studies. TYTELL, M., J. H. CLARK and E. J. PECK, JR. 301

Naltrexone reduces weight gain, alters "β-endorphin", and reduces insulin output from pancreatic islets of genetically obese mice. RECANT, L., N. R. VOYLES, M. LUCIANO and C. B. PERT . 309

Ontogeny of vasopressin and oxytocin in the fetal rat: Early vasopressinergic innervation of the fetal brain. BUIJS, R. M., D. N. VELIS and D. F. SWAAB 315

***In vitro* stimulation of prolactin release by vasoactive intestinal peptide.** SAMSON, W. K., S. I. SAID, G. SNYDER and S. M. McCANN 325

Hypothermia elicited by the intracerebral microinjection of neurotensin. MARTIN, G. E., C. B. BACINO and N. L. PAPP 333

Behavioral effects of dynorphin$_{1\text{-}13}$ in the mouse and rat: Initial observations. WALKER, J. M., R. J. KATZ and H. AKIL 341

Evidence for a cholecystokinin gut-brain axis with modulation by bombesin. BANKS, W. A. 347

MIF-I suppresses deprivation-induced fluid consumption in rats. OLSON, R. D., A. J. KASTIN, G. A. OLSON, B. M. KING, T. K. VON ALMEN, M. C. BERZAS, M. L. IBANEZ and D. H. COY 353

Demonstration of substance P in aortic nerve afferent fibers by combined use of fluorescent retrograde neuronal labeling and immunocytochemistry. HELKE, C. J., W. GOLDMAN and D. M. JACOBOWITZ 359

THEORETICAL REVIEW

Endogenous opiates: 1979. OLSON, G. A., R. D. OLSON, A. J. KASTIN and D. H. COY . 365

BRIEF COMMUNICATIONS

The effect of some brain/gut peptides on plasma cholesterol levels in the rat. PERIC-GOLIA, L., C. F. GARDNER and M. PERIC-GOLIA 381

Systemic injections of gastro-intestinal peptides alter behavior in rats. OLSON, R. D., A. J. KASTIN, T. K. VON ALMEN, D. H. COY and G. A. OLSON 383

Circadian placebo and ACTH effects on urinary cortisol in arthritics. GÜNTHER, R., M. HEROLD, E. HALBERG and F. HALBERG 387

ANNOUNCEMENTS 391

Aims and Scopes

Peptides will publish original reports of systematic studies on the chemistry, biochemistry, neurochemistry, endocrinology, gastroenterology, physiology, and the neurological and behavioral effects of the peptides. A limited number of relevant reviews and theoretical articles, results of symposia, more comprehensive studies as monograph supplements, and brief communications which describe a new method, technique, or apparatus, and results of experiments which can be reported briefly will also be published. Articles will be published in English.

INSTRUCTIONS TO AUTHORS

All manuscripts should be sent to the Editor-in-Chief for review and processing.

General Form. (1) Manuscripts should be submitted in duplicate and should be typewritten, double spaced with wide margins on good quality paper. (2) The title page should contain: title of paper; author(s); laboratory or insitution of origin with city, state, zip code, and country; complete address for mailing proofs; a running head not to exceed 50 characters including spaces between words. (3) References, footnotes, and legends for illustrations should be typed on separate sheets, double spaced. (4) Illustrations (unmounted photographs) should be identified on the reverse with figure number and author(s) name; when necessary the top should be clearly marked. (5) Each table should be typed on a separate sheet and double spaced. (6) All dimensions and measurements must be specified in the metric system. Standard nomenclature, abbreviations and symbols, as specified by Royal Society Conference of Editors. Metrication in Scientific Journals, *Am. Scient.* **56:** 159–164, 1968, should be used throughout. (7) Italics should not be used for the purpose of emphasis. (8) *Brief Communications*. Brief research articles and descriptions of a new method, technique, or apparatus should be restricted to six typewritten pages including references and should not contain more than one figure and one table or two figures or two tables.

Title. The title should not be longer than 85 characters, including spaces between words.

Length of Paper. The Editors insist upon clear, concise statement of facts and conclusions.

Abstract. Each paper submitted must be accompanied by an abstract, which does not exceed 170 words and must be suitable for use by abstracting journals. Abstracts should be prepared as follows:

> EVANS, B. K., S. ARMSTRONG, G. SINGER, R. D. COOK AND G. BURNSTOCK. *Intracranial injection of drugs: Comparison of diffusion of . . .* PHARMAC. BIOCHEM. BEHAV. Marked differences in extent of diffusion have been. . .

A list of from 3–12 (or more) words or short phrases suitable for indexing terms should be typed at the bottom of the abstract page accompanying the manuscript. These terms will be printed with the paper at the end of the abstract.

Drugs. Proprietary (trademarked) names should be capitalized. The chemical name should precede the trade, popular name, or abbreviation of a drug the first time it occurs.

Footnotes. Title page footnotes should be numbered consecutively. Text footnotes should not be used, the material should be incorporated into the text. Table footnotes: see *Tables* (b).

References. Literature cited should be numbered in brackets in text (only one reference to a number) and listed in alphabetical order on a separate sheet at the end of the manuscript. *Do not recite names of authors within the text.* Journal citations in the reference list should contain the following: (a) surnames and initials of all authors (surname of first author precedes initials; initials precede surnames of all co-authors); (b) title of article; (c) journal title abbreviated as listed in the 4th edition of the *World List of Scientific Periodicals*; (d) volume, inclusive pages, and year. Example:

> 1. Miller, M., J. Leahy, F. McConville, P. J. Morgane and O. Resnick. Utilization f ^{14}C-tyrosine in brain and peripheral tissues of developmentally protein malnourished rats. *Brain Res. Bull.* **3:** 681–686, 1978.

Book references should be in the following order: author, title, city of publication, publisher, year, and pages. Example:

> 1. Mello, N. K. Behavioral studies of alcoholism. In: *The Biology of Alcoholism, Vol. 2, Physiology and Behavior,* edited by B. Kissin and H. Begleiter. New York: Plenum Press, 1972, pp. 219–291.
> 2. Myers, R. D. *Handbook of Drug and Chemical Stimulation of the Brain.* New York: Van Nostrand Reinhold Company, 1974.

Citations such as "Unpublished observations," "Personal communication," "Manuscript in preparation," "To be published," should not be entered in the list of References, but may be noted in the text without serial numbers, in parentheses.

Illustrations. (a) Prepare for use in a single column width (8.4 cm) or double column width (17.4 cm) whenever possible. (b) All drawings for reduction to a given size should be drawn and lettered to the same scale. (c) All illustrations should be referred to as figures and numbered in Arabic numerals. (d) Lettering should be done in India ink or some suitable transfer lettering process and must be proportionate to the size of the illustrations if it is to be legible after reduction. Free hand or typewritten lettering is not acceptable. Lettering should be sized so that its smallest elements (subscripts and superscripts) will be readable when reduced. (e) When possible all lettering should be within the framework of the illustration; likewise the key to symbols should be on the face of the chart. The following standard symbols should be used as they are easily available to the printer: ● ○ ■ □ ◆ ◇ ▲ △ ▼ ▽ ★ ☆ (f) Actual magnification of all photomicrographs should be given. (g) Sharply contrasting unmounted photographs of figures on glossy paper are required. (h) For morphological studies with illustrative material, authors should submit manuscripts in triplicate. Mounted glossy prints will be acceptable. At the time of printing, originals will be returned to the senior author.

Tables. (a) Each table should have a brief heading; explanatory matter should be in footnotes, not as part of the title. (b) Table footnotes should be indicated in the body of the table in order of their appearance with the following symbols: * † ‡ § ¶ # **, etc. (c) Tables must not duplicate material in text or illustrations. (d) Vertical rules should be omitted. (e) Short or abbreviated column heads should be used. (f) Statistical measures of variation, SD, SE, etc., should be identified. (g) Analysis of Variance Tables should not be submitted but significant F's should be incorporated where appropriate within the text. The appropriate form for reporting F values is: $F(11,20)=3.05$, $p<0.01$.

Formulas and Equations. Structural chemical formulas, process flow-diagrams, and complicated mathematical expressions should be kept to a minimum. Usually chemical formulas and flow-diagrams should be drawn in India ink for reproduction as line cuts.

All subscripts, superscripts, Greek letters, and unusual characters must be clearly identified.

Anesthesia. In describing surgical procedures on animals, the type and dosage of the anesthetic agent should be specified. Curarizing agents are not anesthetics; if these were used, evidence must be provided that anesthesia of suitable grade and duration was employed.

Proofs. Corrections to the proofs must be restricted to printer's errors only. Other than these, any other alterations will be charged to the author.

Reprints. Each author will receive with his galley proofs a reprint order form which must be completed and returned with the proofs. Late orders cannot be filled since reprints are run at the time the Journal is printed. For individual articles, 25 free reprints will be provided.

Copyright. Publications are copyrighted for the protection of the authors and the publisher. A Transfer of Copyright Agreement will be sent to the author who submits the manuscript. The form must be completed and returned to the publisher before the article can be published.